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## ABSTRACT

This paper describes how Alameda High School in California is using the Speaking Dynamically Pro v2.0 software by Mayer-Johnson to help 13 special education students (ages 14-18) communicate and make the world more accessible. The students have a range of disabilities and skill levels. This computer program enables the students to make choices, convey needs, and have experiences with people in the community that they were unable to communicate with before. The school has developed over 300 communication boards on the Speaking Dynamically Pro v2.0 program for these students. The boards are divided into six main areas: restaurants and food, community businesses, a math game, computer software and game choices, journal writing, and free-time activity choices. The development of the boards was based on the classroom's schedule and curriculum. Boards were created which involved school and community experiences. Also included are conversations or interactions that students would commonly have while in places of business such as the bank, post office, or library. The boards can be used to role-play conversations and interactions, and increase vocabulary and word recognition, as well as familiarize the students with the functions of community businesses. (CR)

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# Amazing Speaking Dynamically Tools Utilized in High School Special Education Classroom

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Alameda High School in Alameda, CA has an exciting community based program for students with severe disabilities. There are 13 students ages 14 through 18 years old who use the Speaking Dynamically Pro v2.0 software by Mayer-Johnson to help them communicate and make the world more accessible. This computer program enables the students to make choices, communicate needs, and have experiences with people in the community that they were unable to before.

Deann Robinson, a special education teacher, and Gerald Attix, a paraprofessional and computer specialist (retired), have spent many hours developing classroom related activities with initial help from Helen Miller at the Center for Accessible Technology and our Alternative Augmentative Communication specialist, Dr. Marilyn Buzolich. We have developed over 300 boards on the Speaking Dynamically Pro v2.0 program for our students. These boards are divided into six main areas: restaurants and food, community businesses, a math game, computer software and game choices, journal writing, and free time activity choices.

In designing the Speaking Dynamically boards for our students, we had three specific areas we had to consider. First, we had to decide exactly what we wanted our students to learn from their use of the program. Secondly, we had to make the program accessible for all of our students at various ability and intellectual levels. Lastly, we had to incorporate the finished product into our everyday school program so that the students could gain the most benefit from its use.

We based the development of the boards on our classroom's schedule and curriculum. We created boards which involved school and community experiences. In making the boards for community experiences, we included businesses and restaurants the students would most likely patronize. We also included conversations or interactions the students would commonly have while in these places of business such as the bank, post office or library. The boards can be used to role-play conversations and interactions, increase vocabulary and word recognition, as well as familiarize the students with what these businesses do. The program can be used with student partners to practice a transaction before going out in the community as well as to review the interaction after returning to the classroom.

The school curriculum based boards were developed in order to increase the possibility of participation by all of the students. The program allows our students to express their opinions, ask questions, make comments, and express feelings. When we have discussions, do math activities, write in our journals, plan shopping and cooking, choose free time activities all of the students can participate to the best of their abilities using this program. It enables all of the students to feel involved; it builds their decision and choice-making skills as well as their self-esteem and independence.

Our students have a variety of abilities and needs. We have a variety of communication levels and multiple mediums of communication. Five of our students are essentially non-verbal. Three of these students have personal AAC devices, two Dynavox users and one Pegasus Lite user. When teaching, we use multi-modal communication such as sign language, picture icon cards, the AAC devices, the computer, and our voices. We try to incorporate all modes of communication into our classroom activities so that our students can participate and communicate to us as well as each other in the style which they are most comfortable and which conveys the most meaning. Speaking Dynamically Pro v2.0 has enabled our students to increase the communication of their needs and enabled them to be more competent and age appropriate. They do not need staff members to interpret their opinions to people who are not familiar with their communication style. They can now do it themselves which reduces frustration and increases participation.

Because our students have different skill levels, they need various ways of accessing the computer. Some of our students use the mouse and some use the keyboard. A few of our students need a more direct manner of access such as a touch screen. A few other students use an adaptive key board, Intellikeys with overlays made from overlay maker and boardmaker.

Some of the students in our classroom have sensory impairments which had to be taken into consideration when creating the boards. A couple of our students have visual impairments. In order for them to receive the most benefit, it is necessary to set the typed message boxes with large font, size 24. They also need high contrast between the foreground and background. They need high contrast text cues. The layout of each board has to be consistent, so that specific buttons such as main, group, print, and exit are always in the same place from board to board. The picture icons and pictographs need to be large and simple, but still representative of the key concepts and categories. As the buttons are scanned from left to right as in reading a book, the buttons are highlighted in bright red and there is a spoken preview so that the user knows what the button represents. A few of our students are hearing impaired, so they also benefit from the red highlight for each button and the simple pictographs and icons which are linked to text.

Our students are at various reading levels. Some are non-readers, some are emerging readers, and some rely more on reading than they do on the icon. Every button has a simple pictograph or icon and text linked together, so that every level of user can access the program. This is especially important when writing a journal entry, creating a shopping list, or making an order in a restaurant. The voice output corresponds to the text and the pictographs or icons. This helps increase social interaction and classroom or community participation. People who do not know the students are better able to understand their needs. Parents are able to see what their children are learning and how they are participating in the curriculum.

Many of our students learn experientially, so it is important to practice through role-playing before they go to the bank or other community sites in order to teach the vocabulary, the purpose of the business, and social and verbal interactions which take place there. It brings the experience into context and helps them to understand the interactions involved. Especially since many of the students don't generalize, it is important to make the role-play as meaningful and realistic as possible. The use of popup chat boxes for the community, shopping, and restaurant boards helps the students learn the verbal interactions and conversations which occur in these places. They are able to increase their own verbal skills and word recognition in connection to the specific businesses. It is very useful for our students to practice and role-play these conversations before they go out into the community and patronize these businesses. They have recently practiced the conversations and know the appropriate words and the context of the social interaction. Continued practice and role- playing establishes independence and self-esteem.

With the use of Speaking Dynamically Pro v2.0, students begin to learn how to generalize experiences and role-play interactions in the community and in the classroom. They are better able to participate in discussions and help make decisions such as what they want to cook for lunch and what they would like to buy at the store. By incorporating the use of this computer program into our daily schedule, students can participate in math activities, journal writing, and discussions at the same time as their peers who are more verbal. It helps all students feel involved as well as builds self-esteem and increases independence and social interactions.

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[|Top|](#)[CSUN 98 Papers](#)



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